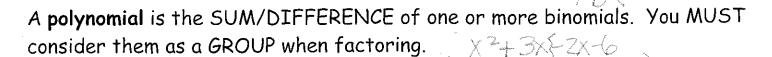
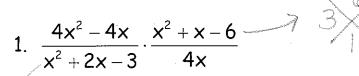
Multiplying Rational Expressions Involving Polynomials





2.
$$\frac{27x^3 - 3x}{3x^2 - 2x - 1} \cdot \frac{3x^2 - 4x + 1}{3x}$$

$$3x^2 - 2x - 1$$

$$3x - 4x + 1$$

$$(3x-1)(x-1)$$
 $(3x-1)(x-1)$ $(3x-1)(x-1)$ $(3x-1)(x-1)$ $(3x-1)(x-1)$ $(3x-1)(x-1)$ $(3x-1)(x-1)$ $(3x-1)(x-1)$ $(3x-1)(x-1)$

Steps:

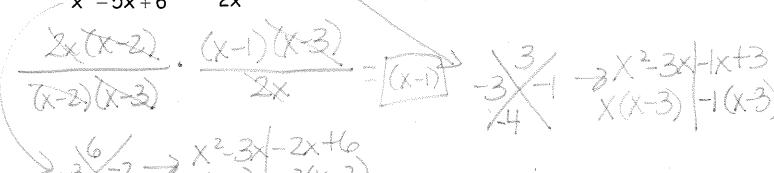
1) Factor the numerators and denominators separately

 $\chi(x+3)/-2(x+3)$

- 2) Multiply-leave as a product of factors
- common to both the numerator and denominator

3.
$$\frac{x+3}{4x^2+7x-15} \cdot 4x+5$$
 $(4x+5)$
 $(4x+5)$
 $(4x-5)$

4.
$$\frac{2x^2 - 4x}{x^2 - 5x + 6} \cdot \frac{x^2 - 4x + 3}{2x}$$



$$-\frac{3}{3} \left(\frac{3}{3} \right) \frac{3}{3} \left(\frac{2}{3} - \frac{3}{3} \right) \frac{1}{1} \left(\frac{1}{1} \right)$$

3x(3x+1)-1(3x+1)

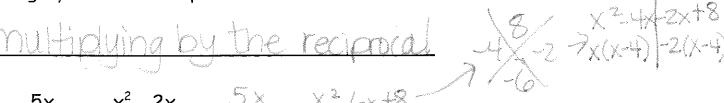
3×(3×4) (3×-1) (3×-1)(3 (3x4)(X-1)



Dividing Rational Expression



Diving by a rational expression is the same as



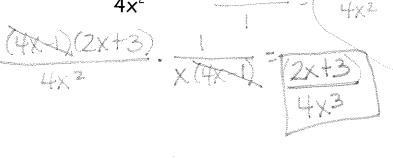
1.
$$\frac{5x}{3x-12} \div \frac{x^2-2x}{x^2-6x+8}$$
3. Steps:
1) "Flip" the 2nd fraction.
2) Factor the numerators and denominators separately

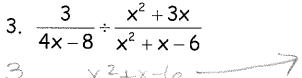
- 2) Factor the numerators and denominators separately
- 3) Multiply-leave as a product of factors
- 4) Cancel out any factors denominator

2.
$$\frac{8x^2 + 10x - 3}{4x^2} \div (4x^2 - x)$$

$$4) \text{ Cancel out any factors}$$

$$4x^2 + 10x - 3$$





$$\frac{3}{4\times -8} \div \frac{}{\times^2 + \times -6}$$

4.
$$\frac{x}{x+3} \cdot (4x+1) \div \frac{16x^2-1}{x+3}$$

$$\frac{1}{10} + \frac{3}{12} + \frac{3}{12}$$

